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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,846	11/16/2001	Wen-Lung Liu	LELI 3448	9262
321	7590	01/14/2005	EXAMINER	
SENNIGER POWERS LEAVITT AND ROEDEL ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			EASTHOM, KARL D	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/991,846

Applicant(s)

LIU, WEN-LUNG

Examiner

Karl D Easthom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's application has been revived pursuant to the Petition Decision of 8/30/2004.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 3-7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, it is not clear how the metal foil is exposed at the two ends, if the electrodes are "for enclosing the ...cut sections of the patterned conducting metal foil exposed at the two ends". It also appears at Fig. 13B of applicant's specification that the metal foil is not exposed. Similar remarks apply to claim 5, where it is not clear how the raw material can be both exposed and enclosed.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

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reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 3 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by McGuire et al. '391. McGuire discloses the claimed invention at Fig. 9G with raw material substrate 20, insulating layer 120, and terminal electrodes 150, 180. Insulating layer 120 is for enclosing where applicant does not employ "enclosing" as covering all surfaces. As an alternative, see the rejection below. There are at least five conducting surfaces depicted, two for each of the three planar layers shown. Moreover, there are at least five including surfaces on the sides of the device and wrapping around the ends, created by the dipping or plating disclosed at col. 11, lines 50-66¹. In claim 5, the ends are exposed and in claim 6, the foils are insulated by the insulating layers covering the edges in part. In claim 3, there are two foil layers 100, 110.

7. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Barrett et al. '997. Barrett et al. '997 discloses the claimed invention at Fig. 11 with raw material substrate 62, insulating layer 42 for enclosing where applicant does not employ "enclosing" as covering all surfaces, and terminal electrodes 66,68. As an alternative to "enclosing", see the rejection below. There are at least five conducting surfaces depicted, two for each of the three planar layers shown. Also, the edges create at least six more conducting surfaces. In claims 3-4, the three layers and multiple foil layers are depicted. In claim 5, the ends are exposed and in claim 6, the foils are insulated by the insulating layers covering the edges in part, such as the edges shown in the Fig. 11 view.

¹For evidence that dipping inherently creates six surfaces, see 'Figs. 1-4 of Inoue JP'106.

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8. Claims 1, 3 and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. '553. Li discloses the claimed invention at Fig. 11 with raw material substrate 60, foil 52, 54, insulating layer 40, 64 for enclosing where applicant does not employ "enclosing" as covering all surfaces, and terminal electrodes 66, 68. There are at least five conducting surfaces depicted, two for each of the three planar layers shown. Also, the edges create at least six more conducting surfaces. In claims 3-4, the three layers and multiple foil layers are depicted. In claim 5, the ends are exposed and in claim 6, the foils are insulated by the insulating layers covering the edges in part, such as the edges shown in the Fig. 11 view.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire et al. '391 or Barrett et al. '997, as applied to claims above, in view of Burke et al. The invention is disclosed as noted above except here, enclosing means covering more than two surfaces, and for claim 7, except the paste. Burke discloses enclosing with an insulating layer 26 a resistor at Fig. 7 in order to protect it or to insulate it, and a paste silver layer 22 for a thermistor disclosed for use with soldering including a tin and lead layer formed for ideal soldering characteristics for mounting on circuit boards, as disclosed at col. 4, lines 1'-24, such that such an enclosing layer and termination would have been obvious, since each reference discloses circuit board mounting.. A tin/lead alloy is disclosed at col. 12, lines 5-12 of McGuire et al. for soldering.

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11. Applicant's arguments filed 6/25/2004 have been considered but they are not persuasive. Applicant argues that there are not five conductive surfaces in McQuire et al., apparently, because five surfaces do not directly physically contact the resistive polymer portions. This is not germane to the claim. Further, applicant does not disclose such contact either. (It appears only two surfaces of the terminal 218 physically contact conductive or resistive portions of the device at Fig. 13A, further making applicant's arguments not clear.) There are at least five conductive surfaces. Indeed, any solid material has six surfaces. Thus a solid metal layer has at least six conductive surfaces. Similar remarks apply to Burke. As to no motivation to combine Burke because NTC and PTC are different, this is not persuasive. The motivations are supplied above, and the resistors are both in the limited class of thermistors. As to different ways of manufacturing and different aspects disclosed, none is relevant to the claimed invention.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom
Primary Examiner
Art Unit 2832

KDE